

PATENT ABSTRACTS OF JAPAN

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(11)Publication number : 11-074352

(43)Date of publication of application : 16.03.1999

(51)Int. Cl.

H01L 21/768

H01L 21/316

H01L 29/78

(21)Application number : 09-339303

(71)Applicant : SEIKO EPSON CORP

(22)Date of filing : 25.11.1997

(72)Inventor : MOROZUMI YUKIO
ASAHIWA MICHIO
SUZUKI EIJI
MATSUMOTO KAZUMI
MORIYA NAOHIRO

(30)Priority

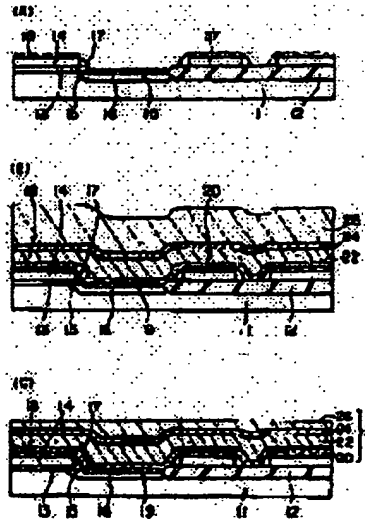
Priority number : 09178091 Priority date : 03.07.1997 Priority country : JP

(54) SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a semiconductor device comprising an interlayer insulating film which can be formed at a low temperature in comparison with a conventional interlayer insulating film using a BPSG film, is excellent in flatness and enables the formation of a highly reliable contact structure on a semiconductor substrate, and a method of manufacturing the device.

SOLUTION: A process of forming an interlayer insulating film 11 comprises a process wherein a hydrogen-containing silicon compound and hydrogen peroxide are reacted with each other by a chemical vapor deposition method to form a first silicon oxide film 22, a process wherein at least one kind of the compound or the element among a silicon compound, oxygen and an oxygen-containing compound and an impurities-containing compound are reacted with each other by the chemical vapor deposition method to form a second porous silicon oxide film 24, and a process wherein an annealing treatment is performed at a temperature of 600 to 850°C and the films 22 and 24 are microscopically formed. The film 22 is formed at a low temperature in comparison with a BPSG film and has excellent self-flattening characteristics in itself.



LEGAL STATUS

[Date of request for examination]

24.03.2000

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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